

California Regional Water Quality Control Board
North Coast Region

Order No. R1-2003-0068
ID No. 1B01078RSON

Waste Discharge Requirements

For

The Humane Society of Sonoma County
Animal Shelter Facility

Sonoma County

The California Regional Water Quality Control Board, North Coast Region (hereinafter the Regional Water Board), finds that:

1. The Humane Society of Sonoma County (hereinafter Permittee) submitted a Report of Waste Discharge dated July 18, 2001. Supplemental information to complete filing of the application was submitted on March 18, 2002, and January 17, 2003 to complete the application for waste discharge.
2. The report and supplemental information describe the renovation and expansion of an existing animal shelter facility located at 5345 Highway 12 in unincorporated Sonoma County. The new facility, to be known as the "Humane Society of Sonoma County Animal Shelter Facility", will function as a pet adoption and educational facility in addition to providing veterinary services. The facility is further identified as Sonoma County AP No. 060-030-046 within SW ¼ Section 1, T7N, R8W, MDB&M (latitude 38° 27'N, and longitude 122° 45'W) of the Sebastopol quadrangle map as shown in Attachment A to this Order. The Laguna de Santa Rosa is located approximately one mile west of the facility.
3. Wastewater treatment and disposal for the existing facility is presently provided by a septic tank and an on-site mound system with a peak design flow of 2,223 gallons per day (gpd) that was approved by the County of Sonoma Permit and Resource Management Department (PRMD). A mound system is an alternative to a traditional leachfield disposal system and is typically used for areas with high ground water levels. The existing system is being expanded to serve the renovated Humane Society.
4. System capacity – The new wastewater treatment and disposal facilities are designed to accommodate a maximum peak wastewater flow of 2,423 gpd and an average daily wastewater flow of 1,615 gpd. The animal shelter facility is expected to generate an actual peak wastewater flow of approximately 1,400 gpd of human and animal waste primary from animal shelter cleanup activities and toilet flushing.
5. Treatment and Disposal System – The Permittee's treatment facilities are described as a package secondary on-site wastewater treatment plant. The

treatment system consists of a 4,000-gallon septic tank fitted with a fixed activated sludge treatment (FAST) system that is capable of providing up to 75 percent reduction in total nitrogen and a significant reduction in pathogenic microorganisms in the treated effluent. Effluent from the aerobic treatment unit will be discharged to a 2,500-gallon sump tank and pumped to a mound disposal system through a dual-alternating pump and pressure distribution system.

The mound disposal system is described as a dual-mound system consisting of an existing mound system to receive domestic waste and a mound system to receive waste from animal handling activities. The existing domestic mound system does not meet the minimum criterion of 24 inches for separation between the anticipated highest level of groundwater and native ground surface as specified in the Basin Plan's *Policy on the Control of Water Quality with Respect to On-site Waste Treatment and Disposal Practices*. The minimum separation is 14.4 inches, based on the anticipated highest level of groundwater of 18 inches and a maximum groundwater rise of 3.6 inches resulting from localized mounding effects. The existing domestic mound system, however, has been routinely monitored by the County of Sonoma PRMD since 1987 and has been in compliance with County performance standards for removal of total and fecal coliform bacterial, and nitrates. The daily wastewater flow to the existing domestic mound system will not increase above the current permitted flow of 400 gpd and is not expected to cause or contribute to significant degradation of groundwater quality. The existing animal waste mound system will be extended by 50 lineal feet and will receive the balance of the anticipated wastewater discharge. The animal waste mound system meets all Basin Plan criteria for an alternative on-site wastewater treatment and disposal system.

6. The Permittee has installed a system of groundwater monitoring wells to monitor the performance of the on-site treatment and disposal system. The system consists of 26 shallow monitoring wells installed within the two mound beds and a total of four 24-inch deep monitoring wells located 25 feet downgradient of the domestic waste mound and the expanded animal waste mound. Additionally, the Permittee has installed two deep groundwater monitoring wells at approximately 70 feet downgradient of the mound disposal system. Each deep groundwater monitoring well is installed to a depth of eight feet.
7. Animal waste solids not discharged to the septic system are disposed of at a municipal solid waste landfill in accordance with a Manure Management Plan developed by the Permittee as a condition of County of Sonoma Use Permit No. UPE 00-0132.
8. The new wastewater treatment and disposal facilities are defined by the County of Sonoma PRMD as a Class 1 septic system, as the construction of the new Humane Society facilities involves a greater than 55 percent increase of square

footage to the existing structure. The wastewater treatment and disposal facilities are also regulated under the County of Sonoma's *Guidelines and Regulations for Non-standard Sewage Disposal Systems*.

9. The Permittee has conducted a cumulative impact study as required by the Regional Water Board Water Quality Control Plan for the North Coast Region (Basin Plan) for a commercial on-site wastewater treatment and disposal system receiving a wastewater flow or greater than 1,500 gallons per day. The Permittee has demonstrated that local groundwater mounding resulting from this discharge will not raise the water table to within 24 inches of the expanded animal waste mound disposal system. An analysis of nitrate loading to areal groundwaters demonstrates that this discharge will result in concentrations of nitrate-nitrogen in ground water that exceeds the drinking water standard (10 mg/l as Nitrogen). The extent of the estimated nitrate plume is shown in the blueprint map titled "Nitrate Plume and Hydraulic Gradient Study" which is included as an attachment to the Permittee's cumulative impact study.
10. The Basin Plan contains the following criteria for evaluating on-site wastewater systems: "On-site systems shall not cause the groundwater nitrate concentration to exceed 10.0 mg/l as N at any source of drinking water on the property nor on any off-site potential drinking water source". The Basin Plan also sets a minimum setback distance of 100 feet between a leaching field and any groundwater well. Therefore, groundwater resources located 100 feet or more from the leachfield shall be protected as a potential drinking water source and shall not be allowed to exceed the groundwater nitrate concentration limit of 10.0 mg/l as a result of the discharge of waste to groundwater. This Order also requires the protection of groundwater at property lines and all areas of the property at 100 feet or more from the Permittee's leachfield systems, as required by the Basin Plan. These receiving water standards shall be assured through the implementation of a Monitoring and Reporting Program, which requires appropriate groundwater quality monitoring. Specification B.1 establishes protective performance requirements to ensure that the nitrate and bacteriological loading of the wastewater will be minimal.
11. The Basin Plan includes water quality objectives and receiving water limitations.
12. The beneficial uses of streams in the area include:
 - a. municipal and domestic supply
 - b. agricultural supply
 - c. industrial service supply
 - d. water contact recreation
 - e. non-contact water recreation
 - f. commercial and sport fishing
 - g. cold freshwater habitat

- h. wildlife habitat
 - i. aquaculture
- 13. Beneficial uses of areal groundwaters include:
 - a. municipal and domestic water supply
 - b. agricultural water supply
 - c. industrial service supply
 - d. industrial process supply
- 14. On November 8, 2001, the Sonoma County Board of Supervisors adopted a negative declaration for the facility upgrade to satisfy the requirements of the California Environmental Quality Act. The Regional Water Board has considered the negative declaration.
- 15. The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.
- 16. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
- 17. The permitted discharge is consistent with the provisions of State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California. This Order provides for a discharge that contains pollutants (coliform organisms and nitrate-nitrogen) that may ultimately enter groundwater underlying the Humane Society of Sonoma County Animal Shelter Facility. Compliance with this Order will therefore allow some degradation of groundwater quality, but will ensure that the discharge will not cause a violation of water quality objectives at specific locations. The Order is consistent with the maximum benefit to people of the state because the discharge: 1) provides enhanced treatment of wastewater from an existing source prior to its subsurface disposal; 2) allows for the expansion of a needed animal service resource. Compliance with these requirements mandates the use of aerobic pretreatment technology prior to disposal of wastewater to a mound disposal system, which constitutes best practicable treatment and disposal of the discharge.

THEREFORE, IT IS HEREBY ORDERED that the Permittee, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of any waste not specifically regulated by this Order is prohibited.
2. Creation of a pollution, contamination, or nuisance, as defined by CWC Section 13050, is prohibited.
3. The discharge of waste to land is prohibited, except as authorized under Section **D. SOLIDS DISPOSAL**.
4. The discharge of waste in excess of the maximum design treatment or disposal capacity of the wastewater treatment and disposal system is prohibited.
5. The discharge of waste to surface waters is prohibited.
6. The discharge of waste to the ground surface is prohibited.

B. SPECIFICATIONS

1. The aerobic treatment unit shall be designed, operated and maintained to achieve at least 50 percent reduction of total Kjeldahl nitrogen, as determined by a comparison of expected nitrogen concentration in the septic tank influent with the measured nitrogen concentration of the septic tank effluent.
2. The mound disposal area shall be graded to promote positive drainage and a ground cover developed and maintained to prevent surface erosion of the mound.
3. The designated leachfield future expansion area shall remain undisturbed and made unavailable to activities that may cause compaction or other disturbance of the soil, such as vehicle parking, large animal housing, and temporary storage structures.

C. GROUNDWATER LIMITATIONS

1. The storage and disposal of the treated wastewater shall not cause or contribute to a statistically significant increase in the level of fecal coliform bacteria in groundwater, compared to the background fecal coliform bacteria concentration measured at a monitoring well located upgradient of both mounds.
2. The storage and disposal of the treated wastewater shall not cause or contribute to a concentration of nitrate nitrogen in groundwater in excess of 10 mg/l at a distance greater than 100 feet from the mound disposal system or at any property line.
3. The storage and disposal of the treated wastewater shall not cause or contribute to levels of chemical constituents in groundwater that exceed the levels specified in

the California Code of Regulations (CCRs), Title 22, Division 4, Chapter 15, Article 4, Section 64435.

4. The storage and disposal of the treated wastewater shall not cause or contribute to levels of radionuclides in groundwater in excess of the limits specified in the CCRs, Title 22, Division 4, Chapter 15, Article 5, Section 64443.
5. The storage and disposal of the treated wastewater shall not cause or contribute to alterations of groundwaters that result in taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

D. SOLIDS DISPOSAL

1. Animal waste solids not discharged to the septic system shall be disposed of at a legal point of disposal, and in accordance with the State Water Board promulgated provisions of Title 27, Division 2, of the CCRs.

E. GENERAL PROVISIONS

1. Availability

A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel.

2. Severability

Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

3. Operation and Maintenance

The Permittee shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Permittee to achieve compliance with the Waste Discharge Requirements.

4. Change in Discharge

The Permittee shall promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.

5. Change in Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Permittee, the Permittee shall notify the

succeeding owner or operator of the following items by letter, a copy of which shall be forwarded to the Regional Water Board:

- a. existence of this Order, and
- b. the status of the Permittee's annual fee account

6. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Permittee from liability under federal, state, or local laws, nor create a vested right for the Permittee to continue the waste discharge.

7. Monitoring

The Permittee shall comply with the Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program No. R1-2003-0068 and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein. Monitoring and technical reports required to comply with them are mandated pursuant to California Water Code Section 13267. Chemical, bacteriological, and bioassay analyses must be conducted at a laboratory certified for such analyses by the State Department of Health Services.

8. Signatory Requirements

- a. All Permit applications submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed by a responsible corporate officer. For purposes of this provision, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
 - ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. Reports required by this Order, other information requested by the Regional Water Board may be signed by a duly authorized representative provided:

- i. The authorization is made in writing by a person described in paragraph (a) of this provision;
 - ii. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
 - iii. the written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative.
- c. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

9. Inspections

The Permittee shall permit authorized staff of the Regional Water Board:

- a. to enter premises in which an effluent source is located or in which any required records are kept;
- b. access to copy any records required to be kept under terms and conditions of this Order;
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

10. Noncompliance

In the event the Permittee is unable to comply with any of the conditions of this Order due to:

- a. breakdown of waste treatment equipment;
- b. accidents caused by human error or negligence; or
- c. other causes such as acts of nature;

the Permittee shall notify the Executive Officer by telephone as soon as it or its agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

11. Revision of Requirements

This Regional Water Board requires the Permittee to file a report of waste discharge at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge.

Certification

I, Susan A. Warner, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 26, 2003.

Susan A. Warner
Executive Officer